POWER-AWARE WORKLOAD BALANCING

USING VIRTUAL MACHINES

ABSTRACT

A system and method for utilizing the locale-independence of virtual machine technology is employed to facilitate load imbalancing in support of power management. Arbitrary stateless or stateful workloads are migrated as virtual machines from a larger number of resources to a smaller number of resources so as to eliminate workload from some resources. These latter resources can then be placed into a lower-power state to reduce power consumption. When workload rises again, some or all of the lower-powered resources can be powered-on, and workload can be reapplied to them.